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Following Minnesota's Renewable Energy Example: Will Federal Legislation Fly High or Flap in the Wind?

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Note

Following Minnesota's Renewable Energy Example: Will Federal Legislation Fly High or Flap in the Wind?

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International politics surrounding the fight for fossil fuels are getting hot and so are global temperatures.[1] The need for a clean, renewable fuel source is upon us.[2] Wind power could be the fuel source of the future, or could at least slow down global warming, until better technologies are found.[3] Wind development is booming in Europe, and although a few states have seen increased growth, most of the nation continues to ignore the nation's need, and ability, to create renewable forms of energy.[4] Scientists now say society is reaching the critical "no turning back" point regarding global warming.[5] Can renewable technology in the United States be ramped up fast enough to counter this?

This note argues that current federal legislation is not sufficient to support the growth of renewable energy, such as wind power, in the United States. In order to truly encourage business investment, a requisite for successful growth, Congress must enact legislation that is more substantial.[6] Part I describes the history of renewable

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1 . *See* Corey S. Shoock, Note, *Blowing in the Wind: How a Two-Tiered National Renewable Portfolio Standard, a System Benefits Fund, and Other Programs Will Reshape American Energy Investment and Reduce Fossil Fuel Externalities*, 12 FORDHAM J. CORP. & FIN. L. 1011, 1013 (2007) ("The manner in which the United States satisfies its energy needs over the next quarter century will determine the relative health of the country physically, politically, environmentally, and economically.") (footnotes omitted).

2 . *Id.*

3 . *See id.* at 1023–25.

4 . *See id.* at 1023–25.

5 . *See* Gary C. Bryner, *Challenges in Developing a Diverse Domestic Energy Portfolio: Integrating Energy and Climate Policy in the Western United States*, 15 N.Y.U. ENVTL. L.J. 73, 73–74 (2007).

6 . Adam M. Dinnell & Adam J. Russ, *The Legal Hurdles to Developing Wind Power as an Alternative Energy Source in the United States: Creative and Comparative Solutions*, 27 NW. J. INT'L L. & BUS. 535, 584 (2007).

energy growth in the United States, the impairments for wind power (the most cost effective renewable), and how some states and foreign countries have successfully incentivized wind development. Part II critiques the different methods that are currently being used in the United States to encourage renewable energy. Finally, the note addresses a potential federal solution, proposing goals and incentives that must be created on a federal level. This note concludes that the most appropriate way to address the lack of growth of renewable energy sources in the United States is to mandate growth through a Federal Renewable Portfolio Standard (RPS) and provide incentives to investors in a manner similar to European nations.

I. THE HISTORY, CHALLENGES, AND SUCCESSES OF WIND POWER

Wind is the fastest growing source of electricity in the world.[7] Wind power is created by capturing wind in large turbines; as the turbine blades spin, kinetic energy from the attached gears is transferred into electrical energy.[8] Turbine blades are often as long as eighty feet[9] and stand over three-hundred feet in the air.[10] Turbines are frequently placed in groupings called wind farms.[11]

"Wind power is currently the most cost-competitive renewable energy technology—cheaper than solar, biomass, and hydroelectric power."[12] The price of wind power has dropped from $0.80 per kilowatt-hour, twenty years ago, to current prices of around $0.04 per kilowatt-hour.[13] This type of energy has grown slowly in the United States mainly due to the inability of wind technology to compete with cheaper fossil fuels.[14] Recently, however, the rising costs of fossil fuels and increasingly efficient wind technology have begun

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7 . ROBERT Y. REDLINGER ET AL., WIND ENERGY IN THE 21ST CENTURY 215 (2002).

8 . Christopher Cotter, Comment, *Wind Power and the Renewable Portfolio Standard: An Ohio Analysis*, 32 U. DAYTON L. REV. 405, 407 (2007).

9 . Douglas J. Moench, *Wyoming Wind*, WYO. LAW., Oct. 2006, at 14, 15.

10 . Dinnell & Russ, *supra* note 6, at 540.

11 . Cotter, *supra* note 8, at 410.

12 . *Id.* at 408.

13 . Victoria Sutton & Nicole Tomich, *Harnessing Wind Is Not (by Nature) Environmentally Friendly*, 22 PACE ENVTL. L. REV. 91, 93 (2005).

14 . Kim R. York & Richard L. Settle, *Potential Legal Facilitation of Impediment of Wind Energy Conversion System Siting*, 58 WASH. L. REV. 387, 387 (1983).

to even the playing field between wind energy and fossil fuels. [15] Modern wind technology is "increasingly more efficient, quiet, reliable, and inexpensive with each passing year."[16]

In addition to its low price, wind power is a clean source of energy, standing in stark contrast to the highly polluting traditional sources of energy.[17] Other energy sources damage the environment by requiring drilling and mining, transportation of fuel, and the creation of radioactive waste.[18] Currently the only environmental problem linked to wind turbines is bird deaths. These have been greatly reduced by placing wind farms out of migratory routes.[19] Other disadvantages of wind energy include the intermittent nature of wind and expensive infrastructure required to take advantage of wind energy.[20] Wind turbines cannot produce constant energy due to fluctuations in wind and may only generate 20–40% of their total power generation capacity.[21] New technologies are allowing developers to take advantage of lower wind speeds; consequently, power generation and efficiency should soon increase.[22] Another major obstacle that wind-powered energy faces is the necessity of building wind farms in remote agricultural areas.[23] This creates the need for high voltage transmission lines required to support the movement of electricity to populated areas.[24] These lines have been prohibitively expensive in many areas.[25]

The United States Department of Energy estimates that

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15 . *See* Dinnell & Russ, *supra* note 6, at 535–40.

16 . *Id.* at 540.

17 . AM. WIND ENERGY ASS'N, WIND ENERGY: THE DIFFERENCE WIND MAKES (2005), *available at* http://www.awea.org/pubs/factsheets.html (click on publication title).

18 . *Id.*

19 . U.S. DEP'T OF ENERGY, WIND AND HYDROPOWER TECHNOLOGIES PROGRAM: ADVANTAGES AND DISADVANTAGES OF WIND ENERGY (2005), http://www1.eere.energy.gov/windandhydro/wind_ad.html.

20 . *Id.*

21 . Cotter, *supra* note 8, at 408.

22 . A professor in the Mechanical Engineering department of Cleveland State University has developed a new wind turbine called the "Smart Energy Spire." This spire has multiple, miniature turbines on its corkscrew frame that allows for generation of power at very low wind speeds. Posting of Norm Roulet to REALNEO, http://realneo.us/Harnessing-the-Power-of-Wind (Feb. 6, 2007, 12:11 AM).

23 . *See* Dinnell & Russ, *supra* note 6, at 543.

24 . Cotter, *supra* note 8, at 409.

25 . *Id*.

"good wind areas"[26] cover only 6% of the United States, but that this area has the potential to supply one-and-a-third times the current national electricity use.[27] For years, California has led the way for wind technology in the United States.[28] Yet, California ranks seventeenth in a nationwide ranking of states with the greatest wind potential.[29] Minnesota ranks ninth on this list, with the potential to provide 657 billion kilowatt hours of energy per year,[30] enough to power 15% of the United States.[31] Based on the number of installed turbines, Minnesota ranks fourth in the nation for wind production following Texas, California, and Iowa.[32] Even with the growth of wind farms in the United States, wind power still only accounts for less than 1% of the United States' electricity.[33] In the 1970s and early 1980s, interest in wind power grew as the oil crisis began.[34] Although some wind farms were built (mostly in California), national development did not take off.[35] The stalling of wind power development has been attributed to declining oil prices in the 1980s and slower than expected increases in natural gas prices.[36] Additionally, although the federal government supported this early growth with an investment tax credit that incentivized development, it did not support efficiency or overall production.[37] Finally, environmentalists

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[26] . U.S. DEP'T OF ENERGY, *supra* note 19 ("Good wind sites are often located in remote locations, far from cities where the electricity is needed.").

[27] . AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, http://www.awea.org/faq/wwt_policy.html.

[28] . AM. WIND ENERGY ASS'N, QUARTERLY MARKET REPORT: TEXAS OVERTAKES CALIFORNIA AS TOP WIND ENERGY STATE (2006), http://www.awea.org/newsroom/releases/AWEA_Quarterly_Market_Report_072506.html.

[29] . AM. WIND ENERGY ASS'N, TOP 20 STATES WITH WIND ENERGY RESOURCE POTENTIAL, *available at* http://www.awea.org/newsroom/pdf/Top_20_States_with_Wind_Energy_Potential.pdf.

[30] . *Id.*

[31] . Posting of Timothy DenHerder-Thomas to It's Getting Hot in Here, http://itsgettinghotinhere.org (Jan. 22, 2007).

[32] . *Id*.

[33] . Cotter, *supra* note 8, at 405.

[34] . *See* Louise Guey-Lee, *Wind Energy Developments: Incentives in Selected Countries*, EIA, http://www.eia.doe.gov/cneaf/solar.renewables/rea_ issues/windart.html.

[35] . *Id.*

[36] . *Id.*

[37] . *Id.*

often opposed wind power development due to the death of birds, negative visual aesthetics, and noise.[38] Improvements in wind power, along with the reduction of production costs by over 80%[39] are now creating a resurgence of development.[40] In 2004, wind turbines creating a total of 7,976 megawatts of electricity were installed worldwide.[41] This installation has the ability to power approximately 7.9 million homes.[42] Studies show, on average, that one new wind turbine will produce enough electricity to power 500 homes.[43] Recently, the American Wind Energy Association reported that 5,244 megawatts of wind energy was installed in the United States in 2007, an expansion of 45%, to total American wind power that will power 1.5 million more American homes.[44]

A. RENEWABLE PORTFOLIO STANDARDS

Many states have mandated that a certain percentage of their energy consumption come from renewable sources.[45] A Renewable Portfolio Standard (RPS) identifies what percentage of energy a utility must generate from renewable sources.[46] Currently, twenty-two states and the District of Columbia have RPS policies.[47] Generally, a given state's utilities can either build renewable sources of energy to fulfill this requirement or buy credits from other renewable sources such as privately owned wind farms.[48] This method

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38 . *Id.*

39 . UNION OF CONCERNED SCIENTISTS, FACT SHEET: THE RENEWABLE PORTFOLIO STANDARD 1 (2001), *available at* http://www.ucsusa.org/assets/documents/clean_energy/fs_rps_faq.pdf.

40 . Guey-Lee, *supra* note 34.

41 . Mike Koehler, *Developing Wind Power Projects in Massachusetts: Anticipating and Avoiding Litigation in the Quest to Harness the Wind*, 12 SUFFOLK J. TRIAL & APP. ADVOC. 69, 72 (2007).

42 . *Id.*

43 . Wendie L. Kellington, *Siting Wind Energy Facilities in the United States and Key Local Land Use Issues*, A.L.I., Aug. 16-18, 2007, at 797.

44 . Press Release, Am. Wind Energy Ass'n, Installed U.S. Wind Power Capacity Surged 45% in 2007: American Wind Energy Associate Market Report (Jan. 17, 2008), http://www.awea.org/newsroom/releases/AWEA_Market_Release_Q4_011708.html.

45 . ENERGY INFORMATION ASSOCIATION, OFFICIAL ENERGY STATISTICS FROM THE U.S. GOVERNMENT: RENEWABLE PORTFOLIO STANDARDS AND STATE MANDATES BY STATE (2006), http://www.eia.doe.gov/cneaf/solar.renewables/ page/trends/table28.html.

46 . AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, *supra* note 27.

47 . Cotter, *supra* note 8, at 406.

48 . AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, *supra* note 27.

of buying and selling credits allows for different types of renewable sources to compete in the energy market.[49] Because wind energy is more cost-friendly than other renewable sources (e.g., solar, biomass, hydro-electric power), it is often used to fulfill RPS requirements.[50]

Opponents of wind power argue that renewable standards will increase electricity rates for consumers.[51] The American Wind Energy Association estimates that this increase will be an additional $1.60 per month for the average home.[52] Supporters of the RPS counter that even with this increase, overall costs will remain smaller in the long run by reducing the impact of energy-price spikes on consumers and keeping fossil fuel costs lower due to reduced consumption.[53] Studies cited by the Union of Concerned Scientists identify a 0.7% price increase in electricity rates through 2010, but state that a 20% RPS would actually decrease the average bill by the year 2020.[54]

On the federal level, no legislation including an RPS has yet passed.[55] The Senate has passed bills containing an RPS, but the House, until recently, had refused to endorse a national RPS.[56] For example, The Energy Bill that passed in 2005 did not include an RPS.[57] In May of 2007, the Senate introduced S. 1419, The Renewable Fuels, Consumer Protection, and Energy Efficiency Act of 2007,[58] which did not contain an RPS.[59] Then in August, the House passed two energy bills: H.R. 3221 The New Direction for Energy

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49 . *Id.*

50 . *Id.*

51 . Letter from Bruce Josten, Executive Vice President of Government Affairs, Chambers of Commerce, to Chairmen John D. Dingell & Rick Boucher, Chairmen of the U.S. House of Representatives, (June 15, 2007), *available at* http://energycommerce.house.gov/Climate_Change/RSP%20feedback/US%20Chamber%2006%2015%2007.pdf.

52 . AM. WIND ENERGY ASS'N, RESOURCES: WIND ENERGY COSTS, http://www.awea.org/faq/wwt_costs.html.

53 . AM. WIND ENERGY ASS'N, LEGISLATIVE AFFAIRS, http://www.awea.org/legislative/.

54 . UNION OF CONCERNED SCIENTISTS, FACT SHEET, *supra* note 39, at 1.

55 . Cotter, *supra* note 8, at 406.

56 . AM. WIND ENERGY ASS'N, LEGISLATIVE AFFAIRS, *supra* note 53.

57 . *Id.*

58 . *See* S. 1419, 110th Cong. (2007); AM. COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY, POTENTIAL ENERGY LEGISLATION, http://www.aceee.org/energy/national/nrgleg.htm.

59 . S. 1419.

Independence, National Security, and Consumer Protection Act[60] and H.R. 2776 The Renewable Energy and Energy Conservation Tax Act of 2007.[61] Currently, H.R. 3221 includes a 15% Federal RPS for the year 2020 (11% must be from renewables while the last 4% can come from energy efficiency), allows for renewable requirements to be satisfied by trading energy credits, and supports research in the field of renewables .[62]

B. FEDERAL PRODUCTION TAX CREDIT

The federal government has created some tax incentives for renewable energy.[63] In 1992, the Energy Policy Act included a Production Tax Credit (PTC) that provided a 1.9-cent[64] credit for every kilowatt-hour of electricity generated from wind turbines, and sold to the public, during the first ten years of production.[65] Wind farms can deduct the value of this credit from their corporate taxes.[66] One shortcoming of the tax credit is that it can be a challenge to use.[67] For farmers to use the tax credit, they must "materially participate"[68] in the wind project or have passive income (rental or investment income) to claim the credit against.[69] Because most farmers are not materially participating in wind production on their land and do not have passive income, they cannot take advantage of the tax credit in the

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60 . H.R. 3221, 110th Cong. § 1 (2007); AM. COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY, *supra* note 58. While this article was being published the Senate passed H.R. 3221 (Apr. 2008). The bill was re-named "The Foreclosure Prevention Act of 2008." GovTrack.us, Legislation 2007-2008 (110th Congress), http://www.govtrack.us/ (search by bill number) (last visited Apr. 22, 2008). The new name implies that the Senate's version could be significantly different than the House version. The bill could be significant if the House and Senate can agree on a version to send to the President that contains the 15% Federal RPS and other renewable energy provisions.

61 . H.R. 2776, 110th Cong. § 1 (2007).

62 . H.R. 3221. As of April 2008 this is bill was still awaiting Senatorial action.

63 . Koehler, *supra* note 41, at 74.

64 . The Energy Policy Act created a 1.5-cent credit; today, adjusted for inflation, this is a 1.9-cent credit. Guey-Lee, *supra* note 34.

65 . Koehler, *supra* note 41, at 74.

66 . AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, *supra* note 27.

67 . WINDUSTRY, FEDERAL PRODUCTION TAX CREDIT (2007), http://www.windustry.com/federal-production-tax-credit.

68 . The IRS defined "materially participate" as participating more than 500 hours per year. *Id.*

69 . *Id.*

manner that large wind developers can.[70]

The PTC has received public support for its ability to initiate large wind developments and to improve efficiency by rewarding actual production.[71] Unfortunately, Congress has frequently let the PTC expire only to be renewed again; this has occurred three times in seven years and has created a boom-bust cycle in the development of wind farms and other qualifying renewable energy sources.[72] This cycle has set back the industry as statistics show that development drops in the period leading up to PTC expiration, and considerably lags after renewal of the bill before returning to full force.[73] Many new development projects can take over two years to get up and running, so developers often drop new projects when the PTC is not available long-term.[74] The 2007 bill H.R. 2776 passed by the House includes a four-year extension of the PTC;[75] the Senate bill does not extend the credit.[76] In January 2008, the Senate Finance Committee approved a short one-year extension of the PTC, which must be voted on by the full Senate.[77] A similar incentive is available for public utilities that cannot benefit from the PTC.[78] This incentive is a payment (equivalent to what would be gained from the PTC) to public utilities for building wind farms.[79] Finally, the federal government also provides a five-year depreciation schedule that provides a tax benefit to wind developers.[80]

C. SECURING WIND ACCESS

One of the greatest problems for wind farm developers is maintaining unobstructed access to the wind.[81] Wind farms are relatively new to the United States, and there is no legal protection for wind farms when neighbors build tall obstructing buildings.[82] Minnesota has focused on building wind turbines in rural areas where obstructions are not yet an issue, but in the future, problems could arise with competition of new wind farms or community growth that would threaten wind access.[83]

Developers have been securing wind access rights through common law doctrines of land easements and covenants.[84] Solar technology, which has been protected by

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70 . *See id.*

71 . Guey-Lee, *supra* note 34.

the common law, can be used as a model for wind energy.[85] Because courts have refrained from identifying a right to wind access, wind developers have additional risk and often must purchase enough adjacent land or sufficient interest in that land to ensure their wind is unobstructed.[86]

1. Nuisance, Land Easements, and Covenants

Developers can use nuisance law to try to inhibit nearby property owners from interfering with the "enjoyment" of wind access.[87] Nuisance is defined by statute as "[a]nything which is injurious to health, or indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property . . . ."[88] No express right to unobstructed wind currently exists, and courts are hesitant to create this right.[89] Thus, developers must use other methods to protect their investment in wind farms.[90]

Easements and restrictive covenants are often used by developers because they are more cost effective than

72 . Lisa Chavarria, *Wind Power*, 68 TEX. B.J. 832, 834 (2005).

73 . UNION OF CONCERNED SCIENTISTS, RENEWABLE ENERGY TAX CREDIT EXTENDED AGAIN, BUT RISK OF BOOM-BUST CYCLE IN WIND INDUSTRY CONTINUES, http://www.ucsusa.org/clean_energy/clean_energy_policies/ production-tax-credit-for-renewable-energy.html [hereinafter UNION OF CONCERNED SCIENTISTS, RENEWABLE ENERGY TAX CREDIT].

74 . *Id.*

75 . H.R. 3221, 110th Cong. (2007).

76 . S. 1419, 110th Cong. (2007).

77 . Am. Wind Energy Ass'n, Home Page, http://www.awea.org (last visited Mar. 20, 2008).

78 . *See* AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, *supra* note 27.

79 . *Id.*

80 . Minn. Dep't. of Commerce, Energy Info Center, Renewable and Efficiency Incentives, http://www.state.mn.us/portal/mn/jsp/home.do?agency= Commerce (follow "Energy Info Center" hyperlink; then follow "Energy Incentives and Grants" hyperlink; then follow "Renewable and Efficiency Incentives" hyperlink) (last visited Apr. 12, 2008).

81 . York & Settle, *supra* note 14, at 388.

82 . *See id.* at 388–89.

83 . *Id.*

84 . Sutton & Tomich, *supra* note 13, at 116.

85 . York & Settle, *supra* note 14, at 389.

86 . *Id.* at 392–93.

87 . *See id.* at 391.

88 . MINN. STAT. § 561.01 (2002).

89 . Sutton & Tomich, *supra* note 13, at 116.

90 . York & Settle, *supra* note 14, at 392–93.

acquiring surrounding land.[91] However, due to their infrequent use, they can be difficult to negotiate.[92] Two relevant classes are airspace easements and negative easements.[93] Airspace easements, which do not control wind but give rights to the actual space over land, can effectively control obstructions by precluding any building that might project into this space.[94] A negative easement is used to inhibit the owner of the subservient land from specific conduct.[95] A wind developer could create an easement with its neighbors that restricts buildings over a specific height.[96] Both the airspace and negative easements can be drafted to bind future owners of the land, thereby protecting wind access long term.[97]

Nuisance, easements, and covenants are areas of law that are state-regulated.[98] After the development of solar energy, some states took steps to protect the rights of those using this technology.[99] Legislation in some states ensures builders that solar collectors will have unblocked access to the sun.[100] Because solar collectors only require a small area of direct sunlight, the question remains if these legislative steps will protect wind developers who require protection from intrusions in multiple directions and over large areas.[101]

A few states have addressed wind easements and conveyances.[102] Minnesota Statute § 500.30(1)(a) defines wind easement as a "right, whether or not stated in the form of a restriction, easement, covenant, or condition, in any deed, will, or other instrument executed by or on behalf of any owner of land or air space for the purpose of ensuring adequate exposure of a wind power system to the winds."[103] The Minnesota statute states that wind easements should

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91 . *Id.* at 393–94.
92 . *Id.* at 394.
93 . *Id.*
94 . *Id.*
95 . *Id.*
96 . *See id.*
97 . *Id.* at 394–95.
98 . Sutton & Tomich, *supra* note 13, at 116.
99 . *Id.*
100 . *Id.*
101 . *Id.*
102 . *Id.* at 118.
103 . MINN. STAT. ANN. § 500.30(1)(a) (2007).

run with the land,[104] lists what should be included in such an easement,[105] and describes how it can be enforced.[106]

2. Public Regulation—Wisconsin's Alternative

Public regulation is one method that could ease the development of wind farms.[107] Public regulation of land adjacent to wind farms would reduce the cost of building (no payment required to create restrictive easements) and would decrease build time by eliminating negotiations with neigh-bors.[108] Some question the constitutionality of this restriction on an owner's rights to his land, but a reasonable restriction on the use of land would likely withstand constitutional scrutiny.[109]

Wisconsin allows wind and solar developers to receive permits assuring their access to unobstructed wind or sunlight.[110] A permit is only available if no obstruction currently exists, or is already planned.[111] Wisconsin courts have held that,

> the municipality shall grant the permit if: (1) the energy system will not unreasonably interfere with the orderly land use and development plans of the municipality, (2) no person who has present plans to build a structure that would impermissibly interfere with the energy system has expended more than $500 or otherwise made substantial progress toward planning or constructing such a structure, and (3) the benefits to the applicant and the public will exceed any burdens.[112]

Once a permit is granted, the wind developer is protected by statute and can recover for damages, costs, and attorney's fees.[113]

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104 . *Id.* § 500.30(2).

105 . *Id.* § 500.30(3).

106 . *Id.* § 500.30(4).

107 . York & Settle, *supra* note 14, at 397.

108 . *Id.*

109 . *See id.* (arguing that although reduction of property is constitutional, it is unlikely to occur because politically it would be more acceptable to have developers negotiate and purchase these rights).

110 . DSIRE, Wisconsin Incentives for Renewable Energy, http://www.dsireusa.org/index.cfm?EE=0&RE=1 (follow Wisconsin hyperlink; then follow "Solar and Wind Access Laws" hyperlink) (last visited Apr. 12, 2008). Wisconsin statute 66.0401 allows property owners to apply for a permit that will guarantee unobstructed access. *Id.*

111 . *Id.*

112 . State *ex rel*. Numrich v. City of Mequon Bd. of Zoning Appeals, 626 N.W.2d 366, 370 (Wis. Ct. App. 2001).

113 . *Id.* at 371.

3. Zoning

Zoning could also be used to support development of renewable energy.[114] States can regulate wind farms by creating specific zoning rules.[115] Considerations would include tower height restrictions, setback requirements, noise restrictions, and minimum lot size requirements.[116] Some states have already enacted statutes to protect renewable energy developers.[117] Washington, out of public interest in solar power, has authorized the creation of solar easements by private negotiation.[118] Washington also allows city planning to encourage and protect access to light for solar energy.[119] Zoning ordinances are beneficial because they can protect wind developer's interests in access to wind but also can protect neighbors by requiring specific set backs for safety or noise levels for public comfort.[120]

The Wisconsin Wind Access Statute also discusses local zoning.[121] Officials can only restrict permits to wind projects when it is required to protect public health or safety, when the restriction does not significantly increase the cost of the system or decrease its efficiency, or when it allows for an alternative at comparable cost and efficiency.[122] In a departure from most zoning permits, the statute states that the burden of proof is with the municipality to prove that a wind system is a public health or safety risk.[123]

D. NO FEDERAL STANDARD FOR PUTTING ENERGY INTO THE GRID

Congress has not adopted any policy for renewable developers to put the energy they create back into the power grid.[124] Some states have incorporated net metering into their renewable energy initiatives.[125] Net metering

114 . York & Settle, *supra* note 14, at 397.
115 . *See id.* at 397–98.
116 . Koehler, *supra* note 41, at 78–79.
117 . York & Settle, *supra* note 14, at 397–98.
118 . WASH. REV. CODE ANN. § 64.04.140.
119 . WASH. REV. CODE. § 36.70.350 (2).
120 . York & Settle, *supra* note 14, at 398.
121 . Mike Sagrillo, *Protecting Your Right to Install a Wind System,* AM. WIND ENERGY ASS'N, http://www.awea.org/smallwind/sagrillo/ms_zoning5_right.html.
122 . *Id.*
123 . *Id.*
124 . Guey-Lee, *supra* note 34.
125 . *Id.*

allows individuals who have installed a renewable energy source to operate a reversible meter.[126] When the individual's output is greater than its use of electricity, the additional electricity is fed back into the grid, and the utility is required to purchase that energy.[127] The price paid for energy put into the grid varies by state, and some states only allow specific types of renewables to participate.[128] Another limitation is the size of the renewable energy project.[129] Many states limit net metering to small projects.[130] Iowa has a guaranteed buy back rate, requiring utilities to buy energy put into the grid at set rates higher than the utility's cost to produce.[131] California allows for net metering of renewable developments producing ten kilo-watts or less.[132]

Some opponents of the renewable movement argue that utilities should not be required to buyback power at a specific price that could lead to increased costs for the consumer.[133] These opponents have argued that the best method to support renewables is through green pricing.[134] Many states have utilities that offer green programs, which allow customers to buy their electricity from renewable sources at a slightly higher price.[135] This program is supported as a method for those seeking renewable energy to provide for the additional cost.[136] Although the actual energy produced from alternative means will not be directed to the purchasing consumer, this method puts more renewable energy on the grid.[137]

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126 . *Id.*

127 . *Id.*

128 . *Id.*

129 . *Id.*

130 . *Id.*

131 . EIA, APPENDIX A. STATE WIND PROFILES: A COMPENDIUM, http://www.eia.doe.gov/cneaf/solar.renewables/rea_issues/windappa.html.

132 . Guey-Lee, *supra* note 34.

133 . See U.S. DEP'T OF ENERGY, ENERGY EFFICIENCY AND RENEWABLE ENERGY, GREEN PRICING: UTILITY PROGRAMS BY STATE (2007), http://www.eere.energy.gov/greenpower/markets/pricing.shtml?page=1 for a chart of green pricing by state.

134 . See AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, *supra* note 27 for a discussion of green pricing.

135 . *Id.*

136 . *See id.*

137 . *Id.*

E. THE 2007 MINNESOTA LEGISLATURE MAKES A COMMITMENT TO RENEWABLES AND WIND ENERGY

Minnesota is well suited for wind farm development in agricultural areas.[138] Wind turbines can create additional income for farmers, and with the footprint of modern turbines shrinking,[139] more land remains for crops and grazing on land leased to turbine developers.[140] The Minnesota Department of Natural Resources estimates that farmers annually receive $2,000 to $5,000 per tower for leasing their land for turbines.[141] Farmers that build their own can make $15,000 to $30,000 a year on only two turbines.[142]

In February, 2007, Minnesota adopted a new RPS.[143] Minnesota's new standard positions the state as a leader in renewable energy mandates.[144] "The RPS requires that 25% of the state's electricity comes from renewable power sources by 2025. Xcel Energy Inc., which delivers half of Minnesota's electricity, would have to meet a 30% renewables benchmark by 2020."[145] Moreover, the 30% mandated for 2020 must include 25% from wind generation.[146] The majority of Minnesota power is currently from coal with only 5% from renewable sources.[147] Public

138 . *See* Sutton & Tomich, *supra* note 13, at 120.

139 . Large turbines can have a footprint of up to forty square feet, and some additional space is required for service road and power lines. Moench, *supra* note 9, at 16.

140 . *Id.* at 15.

141 . Mary Hoff, *Catch the Wind*, MINN. CONSERVATION VOLUNTEER, Nov./Dec. 2003, *available at* http://www.dnr.state.mn.us/volunteer/novdec03/wind.html.

142 . *See* Steil, *supra* note 32.

143 . DSIRE, Minnesota Incentives for Renewables and Efficiency, Renewable Portfolio Standard, http://www.dsireusa.org/index.cfm?EE=0&RE =1 (follow Minnesota hyperlink; then follow "Renewable Portfolio Standard" hyperlink) (last visited Apr. 12, 2008). [hereinafter DSIRE, Minnesota Incentives].

144 . *Id.* See other state RPS mandates at DSIRE, Renewables Portfolio Standards for Renewable Energy, http://www.dsireusa.org/library/includes/type.cfm?EE=0&RE=1 (last visited Apr. 15, 2008).

145 . Green Car Congress, Minnesota Enacts 25% Renewable Portfolio Standards for Power Generation, http://www.greencarcongress.com/2007/02/ minnesota_enact.html (last visited Apr. 12, 2008). Smaller Minnesota utilities are required to have renewable power account for 25% of their electricity by 2025. DSIRE, Minnesota Incentives , *supra* at 143.

146 . DSIRE, Minnesota Incentives , *supra* note 143.

147 . Green Car Congress, *supra* note 145.

surveys in Minnesota show that 89% of the public supports a Renewable Energy Standard.[148]

In May 2007, Minnesota passed The Next Generation Energy Act.[149] The Act establishes "nation-leading requirements" including an 80% reduction in greenhouse gas emissions by the year 2050.[150] This requirement puts Minnesota on track for the required reduction to reverse the effect of green house gasses.[151] "Scientists estimate that greenhouse gas emissions must be cut by 70-80% from 1990 levels by the year 2050."[152] The bill also moves the state's focus from energy efficiency spending goals to energy efficiency saving goals with funding to increase the number of Energy Star Buildings, and increases the state's commitment to locally owned renewable energy.[153]

Currently out-of-state corporations profit the most from wind development.[154] The Next Generation Energy Act is focused on putting more of this wealth back into the local communities.[155] One of the issues plaguing wind development around the country is a lack of high voltage transmission lines to move power.[156] The new bill requires utilities to study and develop plans for power transmission and report back to the legislature.[157]

In addition to the new legislation, Minnesota provides other incentives to wind developers.[158] Minnesota excludes wind farms from sales tax and property tax.[159] Instead of property tax, wind farms in Minnesota pay a production tax in which their tax rate varies by the kilowatt-hour output of the wind development.[160] Large-scale wind projects with the capacity to produce more than twelve megawatts are

148 . Posting of Timothy Den Herder-Thomas, *supra* note 31.

149 . Press Release, Governor Tim Pawlenty, Pawlenty Signs Next Generation Energy Act (May 25, 2007), *available at* http://www.governor.state.mn.us/mediacenter/pressreleases/2007/PROD008146.html.

150 . *Id.*

151 . Bryner, *supra* note 5, at 96.

152 . *Id.*

153 . Press Release, Governor Tim Pawlenty, *supra* note 149.

154 . *See* Steil, *supra* note 32.

155 . *See* Press Release, Governor Tim Pawlenty, *supra* note 149.

156 . *See* Dinnell & Russ, *supra* note 6, at 543.

157 . DSIRE, Minnesota Incentives, *supra* at 143.

158 . MINN. DEP'T. OF COMMERCE, *supra* note 80.

159 . *Id.*

160 . *Id.*

required to make a payment of 0.12 cents per kWh.[161] Medium projects with a capacity between two and twelve megawatts pay 0.036 cents per kWh, and small projects between 250 kilowatts and two megawatts pay 0.012 cents per kWh (projects smaller than 250 kilowatts are exempt).[162] The taxed amounts are paid directly to the county in which the wind turbines are built.[163]

The purpose behind the production tax is to provide revenue for the communities that welcome wind development.[164] Counties support the tax as a method to receive continuous revenue in comparison to a property tax that declines with the depreciation of equipment, and wind developers agree with the tax, which taxes actual production and is proportional to revenue.[165]

Minnesota, along with many other states, provides state grants and loans to support locally owned wind projects. Xcel Energy, as part of an agreement with the state,[166] also provides grants for farmer-owned wind projects in Minnesota.[167] The Minnesota Rural Finance Authority also provides two loan programs for financing wind development at low interest rates. Finally, Minnesota has a net metering plan.[168] Wind farms with up to a forty kW capacity are eligible to sell power back into the grid at the average retail rate.[169]

F. SUCCESS OF EUROPEAN INCENTIVES

Many European nations benefit from the large numbers of wind turbines being built.[170] Surprisingly, "Germany, with

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161 . DEMOCRATIC ENERGY, WIND ENERGY TAXATION IN MINNESOTA, http://www.newrules.org/electricity/utilitytaxmn.html.

162 . *Id.*

163 . *Id.*

164 . *See id.*

165 . U.S. Dep't of Energy, Energy Efficiency and Renewable Energy, Minnesota Production-Based Tax for Wind Energy, http://www.eere.energy.gov/states/news_detail.cfm/news_id=8329 (last visited Apr. 12, 2008).

166 . In return for being able to store nuclear waste in Minnesota, Xcel Energy is required to create a fund for renewable energy development. JESSICA A. SHOEMAKER ET AL., FARMERS' GUIDE TO WIND ENERGY 12–4 (Karen R. Krub ed., Farmers' Legal Action Group, Inc. 2007), *available at* http://www.flaginc.org/topics/pubs/wind/FGWEcomplete.pdf.

167 . *Id.*

168 . EIA, APPENDIX A, *supra* note 131.

169 . *Id.*

170 . Dinnell & Russ, *supra* note 6, at 566.

4.5% of the US land area and a fraction of its wind resource, currently has more than double the US installed capacity."[171] Germany has supported the development of renewables by establishing an electricity feed-in law that guarantees developers the ability to feed-in the power they produce. This law requires utilities to purchase renewable energy at 10.5 cents per kWh (approximately 90% of the retail cost of electricity).[172] This varies significantly from the three to four cents per kWh that wind developers in the United States receive.[173] The German laws allow for the guaranteed prices of renewables to decrease slowly, making renewables more competitive and forcing developers to increase efficiency.[174] The German Renewable Energy Law provides a premium price for wind energy for the first five years of production and then scales back the price according to site quality: more for high performance sites, and less for weaker wind sites.[175] This incentive structure ensures that wind growth occurs in all areas, not only the sites with the highest wind, and that windier sites are not over paid for.[176] These laws have been hailed as a method to support installation of renewables by private individuals, as well as large developers, who can profit from single turbines or small installments.[177] Under the German feed-in system, wind energy capacity has expanded 70% each year for a decade.[178]

II. ANALYSIS

A. CRITIQUE OF CURRENT ATTEMPTS TO JUMP START RENEWABLES

1. Shortcomings in Federal Policy

Little has been done on the national level to support the growth of renewable energy.[179] State incentives, although helpful, are not enough to encourage the amount of growth

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171 . Wilson Rickerson, *German Electricity Feed Law Policy Overview*, WIND-WORKS.ORG, July 2002, http://www.wind-works.org/FeedLaws/Germany/GermanyRickerson.html.

172 . Guey-Lee, *supra* note 34.

173 . *Id.*

174 . *See id.*

175 . RICKERSON, *supra* note 171.

176 . *See id.*

177 . H.J. Cummins, *Clean Money*, STAR TRIB., Jan. 16, 2008, at D1.

178 . *Id.*

179 . *See* Bryner *supra* note 5, at 110.

that the nation needs.[180] So far, Congress has been unwilling to implement a national RPS.[181] Lack of both a national RPS and guaranteed buyback greatly limit the market for renewables when they must compete with highly subsidized traditional forms of energy.[182] The Federal PTC does provide an incentive for commercial investors, but it leaves out private investors, such as farmers, who could provide a large sector of the nation's renewable energy.[183] In addition, the short-term PTC that Congress has allowed to expire multiple times does not show long-term congressional support of renewables and the proposed one-year renewal does not provide the long-term incentive needed by developers.[184]

2. Renewable Portfolio Standards, Minnesota Takes the Lead

Minnesota's new energy policy has been hailed as nation leading.[185] The policy sets one of the nation's highest goals for a RPS at 30% renewables in 2025 and an 80% reduction in greenhouse gas emissions by 2050.[186] This goal is in line with what scientists believe is necessary to reverse the effects of greenhouse gasses.[187] Additionally, Minnesota has imple-mented significant incentives and subsidies for growth.[188] The elimination of sales and property tax is a significant benefit for developers.[189] The state has also created an incentive for local communities to welcome renewables through the production tax because the revenues remain in the local community.[190] By keeping the revenue in the community, towns receive a major benefit in this new industry.[191] The creation of a production tax is a fair alternative to property taxes since wind developers will only

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180 . *See* ERNEST ORLANDO LAWRENCE, BERKELEY NAT'L LAB., ANALYZING THE INTERACTION BETWEEN STATE TAX INCENTIVES AND THE FEDERAL PRODUCTION TAX CREDIT FOR WIND POWER 3 (2002), http://eetd.lbl.gov/EA/ EMS/reports/51465.pdf.

181 . *See* Bryner *supra* note 5, at 110.

182 . *See id.* at 107.

183 . WINDUSTRY, FEDERAL PRODUCTION TAX CREDIT , *supra* note 67.

184 . UNION OF CONCERNED SCIENTISTS, RENEWABLE ENERGY TAX CREDIT, *supra* note 73.

185 . DSIRE, Minnesota Incentives, *supra* note 143.

186 . Press Release, Governor Tim Pawlenty, *supra* note 149.

187 . Bryner, *supra* note 5, at 96.

188 . DSIRE, Minnesota Incentives, *supra* note 143.

189 . MINN. DEP'T. OF COMMERCE, *supra* note 80.

190 . *See* DEMOCRATIC ENERGY, *supra* note 161.

191 . *See id.*

be charged a percentage of their income rather than a property tax that could be much higher than production or rise unexpectedly.[192]

Minnesota also has a net metering system that allows energy producers to feed their surplus energy into the grid for payment.[193] However, Minnesota only requires payment for this energy at the average cost of traditional electricity and only allows forty kilo-watts or less to be fed into the grid.[194] Although this provides some incentive for renewables, such as wind, it can limit the overall installation for an individual if he or she is unable to feed energy produced back into the grid for payment.[195]

Renewable portfolio standards and incentives for renewables are clearly creating interest and growth in the renewable industry.[196] States that have not yet instituted incentives have seen very little, if any, installation of renewables.[197]

3. Easements, Permits, and Zoning

Minnesota and a few others states allow for the creation of wind easements.[198] Developers may contract with neighbors to maintain unobstructed access to the wind by creating a covenant or negative easement.[199] These agreements can be time consuming and prohibitive if a neighbor does not agree.[200] For wind developers, this is a monetary burden in addition to the cost of buying or leasing the land where the turbines sit.[201]

Wisconsin has created a wind access permit that allows a developer to achieve the same rights as a covenant or

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192 . MINN. DEP'T. OF COMMERCE, *supra* note 80.

193 . EIA, APPENDIX A, *supra* note 131.

194 . *Id.*

195 . Think SunSmart, Opinion Poll, http://www.thinksunsmart.com/opinionpoll.htm, (last visited Mar. 22, 2008).

196 . *Id.*

197 . *Id.*

198 . York & Settle, *supra* note 14, at 393–96.

199 . *Id.* at 394.

200 . *See id.*

201 . *See* WINDUSTRY, KNOW YOUR BUSINESS STRUCTURE, http://www. windustry.org/wind-basics/learn-about-wind-energy/wind-basics-know-your-business-structure/know-your-business-stru (discussing different financial arrangements including purchasing land, leasing, and easements).

easement without the added expense.[202] Wisconsin's permit system is a major step forward for renewables but can easily make citizens nervous when their land rights may be impeded upon without compensation.[203] However, the Wisconsin statute requires an owner who applies for a permit to provide notice to the owner of any property that might be restricted by the permit; the notified owners may then request a hearing.[204] This system allows for notice to the restricted landowners but also requires the municipality to grant the permit unless specific circumstances exist.[205]

4. The European Incentives Create the Greatest Growth

European nations are currently leading the world in energy produced from wind power. Denmark produces 21% of its power from wind energy and Germany produces 7%.[206] These nations have provided incentives for renewables through feed-in laws that mandate a premium price for renewable energy fed into the grid.[207] The feed-in laws have been successful due to equal incentives for all investors.[208] Whether a commercial entity or an individual builds a wind turbine, they receive the same price for as much power as they can produce.[209] This incentive differs from the American PTC that favors business entities, and from net metering laws that limit the amount of energy that can be fed back into the grid by developers.[210] In addition, the premium price required by European nations spreads the cost of implementing renewables across the nation.[211] The German feed-in law has increased the average household's energy bill $2.00 a month.[212] This example shows that a

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202 . EIA, APPENDIX A, *supra* note 131.

203 . State *ex rel.* Numrich v. City of Mequon Bd. Of Zoning Appeals, 242 Wis. 2d 677 (Wis. 2001).

204 . *Id.* at 685–86.

205 . A permit shall be granted if the system doesn't reasonably interfere with land use, no person has spent over $500 on a building that would interfere with the system, and the benefits exceed any burdens. *Id.* at 686.

206 . EUROPEAN WIND ENERGY ASSOCIATION, WIND ENERGY LEADS EU POWER INSTALLATIONS IN 2007, http://www.ewea.org/fileadmin/ewea_documents/mailing/windmap-08g.pdf.

207 . Guey-Lee, *supra* note 34.

208 . *See id.*

209 . *See id.*

210 . *See id.*

211 . *See id.*

212 . Cummins, *supra* note 177.

small increase for everyone can yield a large growth in national energy.[213]

B. A FEDERAL SOLUTION INCLUDES LONG-TERM GOALS, INCENTIVES AND CHANGES IN POLICY

1. A Federal Proposal

Depleting fossil fuels, environmental effects, and economic growth are all reasons to support a change in national policy to kick start renewable energy growth.[214] The growth of renewables, such as wind energy, will reduce pollution and provide new jobs and renewable "cash crops" for farmers.[215] Presently the legislature appears to lack urgency in addressing the nation's energy crisis.[216] The legislature must make a concerted effort to support renewables over traditional forms of energy.[217] This will require significant funding for research on the newest renewable ideas and financial backing for already competitive and functioning renewables.[218]

The legislature must make a political commitment to both long-term and short-term goals to achieve the change that is needed in the nation's energy infrastructure.[219] Existing federal incentives are vital to reducing up-front costs of purchasing, installing, and getting new forms of electricity into the grid.[220] However, long-term policies in the form of federal RPS requirements, guaranteed feed-in pricing, mandatory net metering, and increased research and development funds are needed to create a continuing market for new forms of energy.[221] "Aggressive long-term goals, once set, can reduce the political pressure for taking the short-term actions that are essential for achieving the

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213 . *Id.*

214 . Bryner, *supra* note 5, at 73–74.

215 . ENVTL. LAW & POLICY CTR., REPOWERING THE MIDWEST, THE 21ST CENTURY: OPPORTUNITY FOR CLEAN ENERGY IN MINNESOTA, http://www.repowermidwest.org/plan.php.

216 . Bryner, *supra* note 5, at 106.

217 . *See id.* at 101.

218 . *See* ENVTL. LAW & POLICY CTR., *supra* note 215 (discussing the need for support on a state level).

219 . *See* Bryner, *supra* note 5, at 101.

220 . *See* STATE ENERGY CONSERVATION OFFICE, WIND ENERGY INCENTIVES, http://www.seco.cpa.state.tx.us/re_wind-incentives.htm.

221 . *See* Bryner, *supra* note 5, at 101.

future goals . . . ."[222]

In order for developers to get into the market, the federal government must continue to offer subsidies in the form of property tax reductions, accelerated depreciation, and grants and loans.[223] Although the federal government has already instituted many of these elements, they are not fully used.[224] The production tax credit is the main incentive currently provided but it is not available to private individuals, like farmers, who need aid in setting up wind energy renewables.[225] The production tax credit should be dropped for a guaranteed pricing law similar to the feed-in laws of Europe.[226] Finally, legal roadblocks for renewable development must be removed.[227] Zoning, permits, and easements must be reworked to facilitate growth.[228]

2. Support for a Federal Policy

a. Long Term Policies: RPS

A national RPS is a good method for diversifying the energy industry, reducing dependence on foreign oil, and reducing greenhouse gas emissions.[229] Instituting a national RPS will create a long-term mandate for every state to work towards. This will create a market for renewable energy and reduce the risk to developers.[230] By greatly lowering risk, both corporate entities and individual citizens will participate, and a diverse market of renewables will be created.[231] "According to a study by the Union of Concerned Scientists, a 20% national RPS would result in $1.2 billion in

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222 . *Id.* at 111.

223 . AM. WIND ENERGY ASS'N, WIND ENERGY AND U.S. ENERGY SUBSIDIES (2006), http://www.ifnotwind.org/pdf/Subsidy_10-6-06.pdf.

224 . UNION OF CONCERNED SCIENTISTS, RENEWABLE ENERGY TAX CREDIT, *supra* note 73.

225 . WINDUSTRY, FEDERAL PRODUCTION TAX CREDIT, *supra* note 67.

226 . *See* Guey-Lee, *supra* note 34.

227 . *See id.*

228 . *See id.*

229 . *See* AM. WIND ENERGY ASS'N, NATIONAL RENEWABLES ENERGY PORTFOLIO STANDARDS (RPS), http://www.awea.org/legislative/pdf/Federal_ RPS_Factsheet.pdf [hereinafter AM. WIND ENERGY ASS'N, RPS].

230 . *See* UNION OF CONCERNED SCIENTISTS, FACT SHEET, *supra* note 39. *But see* Mary Ann Ralls, *Congress Got it Right: There's No Need to Mandate Renewable Portfolio Standards*, 27 ENERGY L.J. 451, 453 (2006) (arguing that a national RPS would create inflexible requirements).

231 . *See* UNION OF CONCERNED SCIENTISTS, FACT SHEET, *supra* note 37.

lease payments to farmers and rural landowners by 2020."[232] Implementing a national RPS will drive down costs and create a market for renewable technologies that are commercially feasible.[233] Some states have already begun renewable builds, but that does not mean that other states cannot catch up.[234] Rigorous timetables must be put in place so that each state takes responsibility for energy development.[235] Studies show that a 20% RPS by 2020 would cost consumers in the United States virtually no more than current energy costs.[236]

A national renewable energy credit trading system, similar to what is already in place in many states, will help other states that have difficulty installing renewables.[237] According to surveys, 70% of the public supports a 20% RPS.[238] Yet, legislators have argued that some states cannot meet the requirements of a national RPS.[239] If a state chooses not to build its own renewables that state should still be responsible for sharing the cost of the needed growth by purchasing credits.[240] Critics are wrong to assume that the United States cannot maintain the same renewable energy growth as nations with inferior resources and less land area.[241] Currently the United Kingdom is planning to increase its renewable use to 20% by 2020; Denmark and Finland are planning for 30% by 2010.[242] Studies by both the Union of Concerned Scientists and Energy Information Administration show that consumer energy bills in 2020 will be lower if a national RPS is created.[243]

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232 . AM. WIND ENERGY ASS'N, RPS, *supra* note 229.

233 . UNION OF CONCERNED SCIENTISTS, FACT SHEET, *supra* note 39.

234 . AM. WIND ENERGY ASS'N, RESOURCES: WIND WEB TUTORIAL, *supra* note 27.

235 . *See id.*

236 . SIERRA CLUB, ENERGY: MYTH VS. REALITY ABOUT A 20% RENEWABLE PORTFOLIO STANDARD, http://www.sierraclub.org/globalwarming/cleanenergy/renewables.asp.

237 . UNION OF CONCERNED SCIENTISTS, FACT SHEET, *supra* note 39.

238 . SIERRA CLUB, *supra* note 236.

239 . Ralls, *supra* note 230, at 454–56.

240 . *See* Lisa Prevost, *Renewable Energy: Toward a Portfolio Standard? Tradable Credits Gain Support, but Some Question Cost, Infrastructure*, FORTNIGHTLY MAG., Aug. 1, 1998, *available at* http://www.pur.com/pubs/3026.cfm.

241 . SIERRA CLUB, *supra* note 236.

242 . *Id.*

243 . *Id.*

b. Guaranteed Pricing

The major difference between the United States and foreign countries with proliferating renewables are the guaranteed prices and feed-in ability.[244] Developers in Germany and Denmark are guaranteed prices that are more than twice what American wind producers are paid.[245] This guarantee, which is set to ramp down in the future, is a clear accelerant of renewable development.[246] Many European nations do not even use an RPS.[247] By implementing feed-in laws, they have spurred development of renewables by citizens rather than only forcing the large utilities to build renewables.[248] Guaranteed pricing allows individuals, farmers, and co-ops to compete with utilities and large developers by requiring utilities to pay a fair price for energy put into the grid by anyone.[249] Setting a guaranteed price allows the government to identify the value of renewable energy and subsequently create the amount and speed of renewable growth that it sees fit.[250] Guaranteed pricing must be coupled with a net metering policy that allows all energy producers to feed their entire energy production back into the grid.[251] Energy producers should be allowed to feed in as much energy as they can produce, unlike current state laws that only allow for limited amounts.[252]

Opponents of guaranteed pricing often claim that the

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244 . *See* Guey-Lee, *supra* note 34.

245 . *Id.*

246 . *Id.*

247 . *See* Craig Morris, *The Irony of the U.S. and UK Renewable Policies*, RENEWABLE ENERGY WORLD.COM, June 25, 2007, http://www.renewableenergyaccess.com/rea/news/story?id=49084. Although European nations do not use an RPS, some have used a quota system rather than the guaranteed minimum price system that Germany uses. Rickerson, *supra* note 171. In 2000 Denmark, which had been a fixed price nation, switched to a quota system, and France, which had been a quota nation, switched to the fixed price method. *Id.* "From 2000 to 2001, Denmark's new installations . . . slowed from 603 MW to 115MW, while France's installations . . . nearly doubled from 63 MW to 115 MW." *Id.*

248 . Morris, *supra* note 247.

249 . Paul Gipe, *All Renewables and Renewables for All: Renewable Tariffs for North America*, WIND-WORKS.ORG, Aug. 6, 2007, http://www.wind-works. org/FeedLaws/USA/AllRenewablesandRenewablesforAllRenewableTariffsforNorthAmerica.html.

250 . *Id.*

251 . *See id.*

252 . *See* Guey-Lee, *supra* note 34 (discussing success of European plans that allow unlimited feed-in).

nation should rely on "green pricing" so that those who want more renewables pay the extra cost.[253] This is not the best method for the nation.[254] Renewables provide benefits to society as a whole (including a shift to domestic reliance on energy and increased jobs at home) and by spreading the cost across the entire nation, barely any increase will be felt to the individual consumer.[255]

c. Long-Term PTC

The current federal PTC primarily benefits corporate entities.[256] This is not an adequate incentive for renewable growth since individuals and farmers cannot take advantage of the tax credit without great difficulty.[257] If the legislature maintains the PTC, it must enact it long-term so that it can aid any investor in renewable energy growth.[258] The Federal PTC has been left to expire and then be reinstated, causing a boom-bust cycle in renewable development and proving that this legislation has had success in boosting the development of renewables.[259] The legislature can create stability by enacting a long-term PTC that benefits more investors.[260] The current one-year extension in the Senate will not foster long-term growth.[261] The American Wind Energy Association has reported three consecutive years of record growth while the current PTC was in effect.[262] The American Wind Energy Association advocates a five-year, or longer, PTC for continuing growth.[263]

Opponents of wind energy argue that by providing a subsidy for renewables the federal government is creating a false market.[264] However, there has never been a free

253 . *See* UNION OF CONCERNED SCIENTISTS, FACT SHEET, *supra* note 39, at 2.
254 . *See id.*
255 . *Id.*
256 . WINDUSTRY, FEDERAL PRODUCTION TAX CREDIT, *supra* note 67.
257 . *Id.*
258 . AM. WIND ENERGY ASS'N, LEGISLATIVE AFFAIRS, *supra* note 53.
259 . UNION OF CONCERNED SCIENTISTS, RENEWABLE ENERGY TAX CREDIT, *supra* note 73.
260 . *Id.*
261 . *Id.*
262 . Press Release, Am. Wind Energy Ass'n,, *supra* note 44.
263 . AM. WIND ENERGY ASS'N, LEGISLATIVE AFFAIRS, *supra* note 53.
264 . AM. WIND ENERGY ASSOCIATION, THE MOST FREQUENTLY ASKED QUESTIONS ABOUT WIND ENERGY 7 (2002), http://www.awea.org/pubs/ documents/FAQ2002%20-%20web.PDF.

market in energy.[265] Traditional energy sources like coal and nuclear power receive large hidden subsidies.[266] The National Commission on Energy Policy considered a low-end estimate for federal energy subsidies in 2003 to be $37 billion to $64 billion.[267] Less than 1% of this total went to all renewables, including wind.[268]

d. Property Tax Reductions

Minnesota uses a property tax reduction as an incentive to promote wind development.[269] Property tax can be a significant deterrent to wind development due to the large land space required for wind turbines in comparison to traditional power plants.[270] Is creating this type of false market a good thing? Minnesota's incentive can reduce the cost of electricity from wind by one cent per kilowatt-hour.[271]

III. CONCLUSION

The current lack of support by Congress for renewable energy growth has stunted development of viable renewables, such as wind power. The United States is losing ground to European nations, which already have a large percentage of their energy production from wind. Congress should look to the states and nations with flourishing renewables to outline a new policy regarding the energy crisis. Some of the current solutions being used to increase renewable growth are: Renewable Portfolio Standards, a Production Tax Credit, easements and zoning regulations, buy-back and minimum price requirements, and a production tax that replaces state property taxes.

The current national PTC is insufficient. The PTC is short term and supports only commercial growth so that individuals cannot enter the market. This tax credit is not providing incentives for the needed growth in renewables and should be eliminated completely in favor of systems that are more beneficial. While changes in land easements and

265 . *Id.*

266 . *Id.*

267 . UPC WIND, FAQS (2008), http://www.upcwind.com/environment/faqs.cfm.

268 . *Id.*

269 . MINN. DEP'T. OF COMMERCE, *supra* note 80.

270 . Guey-Lee, *supra* note 34.

271 . *Id.*

zoning have been beneficial to renewable growth, this is an area of law generally governed by the states and Congress is unlikely to likely impose regulation. Similarly, the production tax that has been implemented in Minnesota is beneficial to some renewable developers, but it would be an abuse of federal power to force states to alter property tax regulations.

A national RPS is one way to kick-start renewable growth. A RPS would require growth by all states, or at least a contribution to the overall growth through the purchase of credits. This type of mandate could put the nation in line with the recommended reduction in emissions to reverse greenhouse gas effects. Stopping the effects of global warming must become a national priority. Though a national RPS will require the states to ensure that the needed growth occurs, it will not give any incentive for private individuals to contribute to the growth. In addition to an RPS, the nation should institute a guaranteed buy-back and minimum price system similar to Germany's current laws. European nations that have used a quota system, similar to a RPS, have seen lower levels of growth than those using a minimum price system. The minimum price system ensures private investment in the renewable market. When individuals can profit from their own investment in renewables, such as wind, they will become interested in the nation's renewable growth. This in turn will create public support and negate some of the resistance to building wind turbines.

The current buy-backs and net metering instituted by the states is not comprehensive enough to ensure growth. Although some of these regulations require a minimum price payment for the renewable energy, most set restrictive caps on the amount of electricity that can be fed into the grid. Congress must ensure that all energy created will be compensated for and that the minimum price is sufficient to provide incentives to investors to take on the start-up costs of building renewables. Modeling a system after German law, the legislature could mandate a premium price for a certain number of years to offset start-up costs and then scale back this minimum price. The German system of varying the scale back is a beneficial method for creating growth across the nation. This system will guarantee a higher price (smaller scale back) for developers in less windy states and in turn ensure profits. Developers in the windiest

states will have their minimum price scaled back more but because of the higher production will still have an incentive to invest.

Following the German system may invite some criticism. Arguably, the nation should not spend a premium price on renewable energy that is not as efficient as traditional sources of electricity. Currently renewables cannot compete on a fair playing field. On the other hand, the additional cost that is spent on renewables boosts the nation's economy by providing jobs for manufacturing, installing, and maintaining wind turbines. This cost also reduces our nation's reliance on foreign power sources and achieves the worthy goal of reversing the effects of global warming.

Many European nations have seen growth from instituting just a minimum price and guaranteed feed-in law. In addition to these systems, the United States could benefit from a national RPS. Currently the United States is lagging immensely in renewable growth. If the United States realistically plans to counteract the effects of global warming, it will require even greater levels of growth than Europe has seen. A national RPS that mandates this amount of growth will guarantee that the states power companies complete that benchmark when production by developers, private individuals, and farmers is not enough.

Due to the nation's insufficient growth of renewables, it is now necessary to provide incentives for this market from all directions. Corporate developers, private individuals, and the states must all enter the market. Congress must provide sufficient guarantees so that developers and individuals can invest but must also mandate that the states complete any shortcomings in the overall national goal. The nation's renewable growth can still fly high, but to do so the legislature must identify the level of growth needed, set a strenuous national RPS, and make a commitment to support that level of growth in the form of minimum prices and guaranteed buy-backs.